CLAIMS

1. Method for configuring a telecommunication system comprising at least one sending entity and at least one receiving entity implementing a phase of communicating data conveyed by several transport channels distributed into at least two groups of transport channels, said transport channels of one and the same group requiring to be received with one and the same ratio Eb/I of the average energy of a bit to the average energy of the interference, said phase of communication of the sending entity comprising processing procedures (103A ; 103B; 103C; $Q_{m(i)}$; $Q_{d(i)}$) specific to the groups of transport channels, each processing procedure (103A; 103B; 103C; $Q_{m(i)}$; $Q_{d(i)}$) comprising a rate matching step (112; 114), said rate matching step ensuring the transformation of an input block of an initial size (X_i) into an output block of a final size (Y_i) as a function of a given rate matching ratio (Y_i/X_i), a maximum puncture rate (P_q/PBASE) being defined for each processing procedure (103A; 103B; 103C; $Q_{m(i)}$; $Q_{d(i)}$), characterized in that it comprises in succession:

- a step of determining, from at least one of said entities, for each processing procedure (103A; 103B; 103C; $Q_{m(i)}$; $Q_{d(i)}$), a first parameter (E_q) representative of said rate matching ratio (Y_i/X_i) and a second parameter (P_q) representative of the maximum puncture rate (P_q/PBASE) specific to said processing procedure (103A; 103B; 103C; $Q_{m(i)}$; $Q_{d(i)}$);
- a step of transmitting at least one of said first (E_q) and second (P_q) parameters from at least one of said entities, referred to as the first entity, to another of said entities, referred to as the second entity; and
- a step of calculating by at least said second entity, for each processing procedure (103A; 103B; 103C; $Q_{m(i)}$; $Q_{d(i)}$), the final size (Y_i) of the block obtained on completion of the rate matching step as a function of the initial size (X_i) of the input block on the basis of a criterion, said criterion being dependent on at least one of said first and second determined parameters (E_q, P_q).

2. Method according to Claim 1, characterized in that said criterion belongs to the group comprising:

the set of said first and second determined parameters (E_q, P_q) in respect of the set of said processing procedures ($Q_{m(i)}$; $Q_{d(i)}$);

the set of initial sizes (X_i) of input blocks in respect of said processing procedure ($Q_{d(i)}$);

the set of initial sizes (X_i) of input blocks in respect of the set of said processing procedures ($Q_{m(i)}$) for one and the same multiplexing frame.

3. Method according to Claim 1, characterized in that said step of calculating the final sizes (Y_i) comprises:

- a first step (406) of calculating for each processing procedure a matching ratio (S_q) as a function of said first and second parameters (E_q, P_q);
- a second step (408) of calculating intermediate sizes (Y'_i) of output blocks of one and the same multiplexing frame;
- a step (410) of selecting a maximum payload (N_{JSEL}) from among a set of available maximum payloads in respect of said multiplexing frame as a function of said calculated intermediate sizes (Y'_i);
- a third step of calculating at least one final size (Y_i), each final size (Y_i) being calculated as a function of the selected maximum payload (N_{JSEL}) and of said intermediate sizes (Y'_i), so that the sum of said final sizes (Y_i) of the output blocks of a multiplexing frame is equal to said selected maximum payload (N_{JSEL}).

4. Method according to Claim 3, characterized in that said third step of calculating the final sizes (Y_i) comprises in succession:

- a first step (412) of calculating at least one aggregate size (Z_i), each aggregate size being calculated as a function of said intermediate sizes (Y'_i) corresponding to a function for rounding the product of the selected maximum payload and a ratio of a partial sum of said intermediate sizes (Y'_i) over the total sum of said intermediate sizes (Y'_i);
- a second step (414) of calculating at least one final size (Y_i), each final size (Y_i) being calculated as a function of the aggregate sizes (Z_i) corresponding to the difference of two successive aggregate sizes.

5. Method according to Claim 1, characterized in that, for each processing procedure, the matching ratio (Y_i/X_i) is defined as the product of the first parameter (E_q) and of the extremum for said processing procedures, of a function dependent on the first and second parameters (E_q, P_q).

6. Method according to Claim 3, characterized in that the selected maximum payload is the smallest available maximum payload.

7. Method according to Claim 3 or 6, characterized in that, for each processing procedure, the intermediate matching ratio (Y'/X) is defined as the

product of the first parameter (E_q) and of the extremum for said processing procedures, of a function dependent on the first and second parameters (E_q, P_q).

8. Method according to Claim 4 or 7, characterized in that said function dependent on the first and second parameters (E_q, P_q) is equal, to within a multiplicative constant, to the ratio of the difference between 1 and the maximum puncture rate ($\frac{P_q}{PBASE}$) over the first parameter (E_q), the maximum puncture rate ($\frac{P_q}{PBASE}$) being deduced from the second parameter (P_q) representative of the puncture rate.

9. Method according to any of the preceding claims, characterized in that it comprises a phase of exchanging information between a first and a second entities of the system during the establishment of a communication link from the first entity to the second entity, said exchange phase comprising the steps in which:

the second entity identifies the maximum sending capacity of the first entity,

the second entity determines, for each processing procedure, a value representative of the rate matching ratio (Y_i/X_i) specific to this processing procedure as a function of the maximum sending capacity of the first entity,

the second entity transmits to the first entity the set of values representative of the rate matching ratios (Y_i/X_i) for all the processing procedures,

the first entity determines the rate matching ratios (Y/X) for all the processing procedures as a function of the values received from the second entity.

10.Method according to any of Claims 1 to 9, characterized in that it is implemented within a telecommunication system implementing a CDMA type technology.

11. Method according to claim 10, characterized in that it is implemented in the uplink of said telecommunication system.

12. Base station of the type comprising means for communicating data conveyed by several transport channels distributed into at least two groups of transport channels, said transport channels of one and the same group requiring to be received with one and the same ratio Eb/I of the average energy of a bit to the average energy of the interference, said means of communication of the sending entity comprising processing modules specific to the groups of transport channels,

each processing module comprising rate matching means, said rate matching means ensuring the transformation of an input block of an initial size (X_i) into an output block of a final size (Y_i) as a function of a given rate matching ratio (Y_i/X_i), a maximum puncture rate (P_q/PBASE) being defined for each processing module, characterized in that it comprises:

- means of determining, for each processing module, a first parameter (E_q) representative of said rate matching ratio (Y_i/X_i) and a second parameter (P_q) representative of the maximum puncture rate (P_q/PBASE) specific to said processing module;
- means of transmitting at least one of said first (E_q) and second (P_q) parameters; and
- means of calculating, for each processing module, the final size (Y_i) of the block at the output of said rate matching means as a function of the initial size (X_i) of the input block on the basis of a criterion, said criterion being dependent on at least one of said first and second determined parameters (E_q, P_q).

13. Mobile station of the type comprising means for communicating data conveyed by several transport channels distributed into at least two groups of transport channels, said transport channels of one and the same group requiring to be received with one and the same ratio Eb/I of the average energy of a bit to the average energy of the interference, said means of communication of the sending entity comprising processing modules specific to the groups of transport channels, each processing module comprising rate matching means, said rate matching means ensuring the transformation of an input block of an initial size (X_i) into an output block of a final size (Y_i) as a function of a given rate matching ratio (Y_i/X_i), a maximum puncture rate (P_q/PBASE) being defined for each processing module, characterized in that it comprises:

- means of determining, for each processing module, a first parameter (E_q) representative of said rate matching ratio (Y_i/X_i) and a second parameter (P_q) representative of the maximum puncture rate (P_q/PBASE) specific to said processing module;
- means of transmitting at least one of said first (E_q) and second (P_q) parameters; and
- means of calculating, for each processing module, the final size (Y_i) of the block at the output of said rate matching means as a

function of the initial size (X_i) of the input block on the basis of a criterion, said criterion being dependent on at least one of said first and second determined parameters (E_q, P_q).